

Motorized Extended Guide Goniometer

Stage Size 40 × 40 mm

OSMS-40A

RoHS

CE

High precision motorized goniometers with integrated bearing ways for superior stiffness, accuracy and durability.

Their smooth motion makes them ideal for frequent angle adjustment.



- Extended Contact bearing ways are machined directly into the main body reduce the number of parts and assembly time, making these very durable and cost effective.
- Attachment pins (accessories) are ideal for positioning when assembling into $\alpha\beta$ axis or mounting on various instruments or devices.

Guide

- ▶ Contact our Sales Division if you desire to assemble into an $\alpha\beta$ axis stage.
- ▶ Contact our Sales Division if you desire a rotation center height not listed in the catalog.
- ▶ Manual type (GOHT-40) is also available.

[Reference](#) E174

[WEB Reference](#) [Catalog Code](#) W7092



GOHT-40A***

Specifications

Part Number			OSMS-40A60	OSMS-40A75
(Opposite Model)			OSMS-40A60R	OSMS-40A75R
Mechanical Specifications	Travel [°]		±5	±4
	Stage Size [mm]		40×40	40×40
	Travel Mechanism (reduction ratio)		Worm gear (1: 332)	Worm gear (1: 406)
	Positioning Slide		Extended Contact Ball Guide	Extended Contact Ball Guide
	Stage Material		SUS440C quench hardened	SUS440C quench hardened
	Finish		Super black chrome	Super black chrome
	Weight [kg]		0.4	0.4
Size Tolerance	Stage Height [mm]		15	15
	Rotation Center Height [mm]		60±0.1	75±0.1
	Rotation Center Deflection Accuracy [mm]		Within φ0.01	Within φ0.01
Accuracy Specifications	Resolution	(Full) [°/pulse]	about 0.00217	about 0.00177
		(Half) [°/pulse]	about 0.00108	about 0.00089
	MAX Speed [°/sec]		10	8.9
	Positional Repeatability [°]		±0.004	±0.004
	Load Capacity [N]		19.6(2.0kgf)	19.6(2.0kgf)
	Moment Stiffness [°/N·cm]		Roll 0.6 Yaw 0.6	Roll 0.6 Yaw 0.6
	Lost Motion [°]		0.02	0.02
Sensor	Sensor Part Number			Micro photo sensor: GP1S092HCPIF(Sharp Corporation): Limit Sensor
	Limit Sensor		Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)
	Origin Sensor		None	None

Motor / Sensor Specifications

Motor	Type	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)
	Motor Part Number	PK523HPB-C12 (□28mm)
	Step Angle	0.72°
Sensor	Power Voltage	DC5 – 24V±10%
	Current Consumption	40mA or lower (20mA per sensor)
	Control Output	NPN open collector output DC30V or lower, 50mA or lower
	Output Logic	When shaded: Output transistor OFF (no conduction) : Limit Sensor When shaded: Output transistor ON (conduction): Origin sensor

Compatible Driver / Controller

Control System	Compatible Driver	SG-5M, SG-5MA, SG-55M, SG-55MA, SG-514MSC, MC-7514PCL
	Compatible Controller	GSC-01, GSC-02, SHOT-702, GIP-101, SHOT-302GS, SHOT-304GS, HIT-M-HIT-S, PGC-04-U

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Options

40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

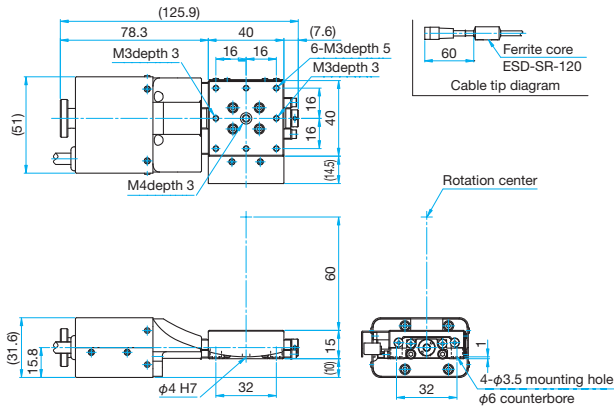
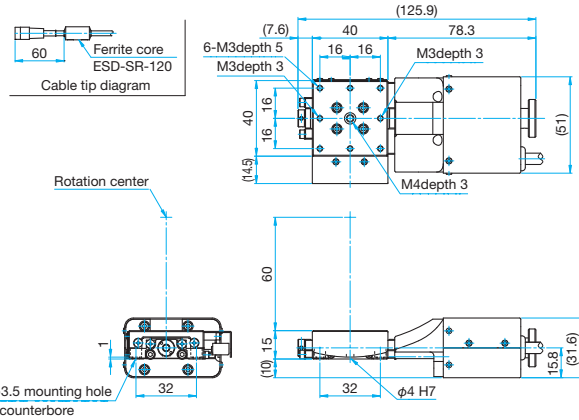
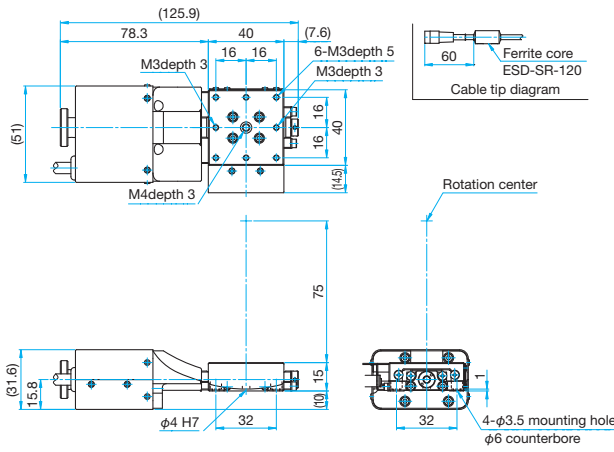
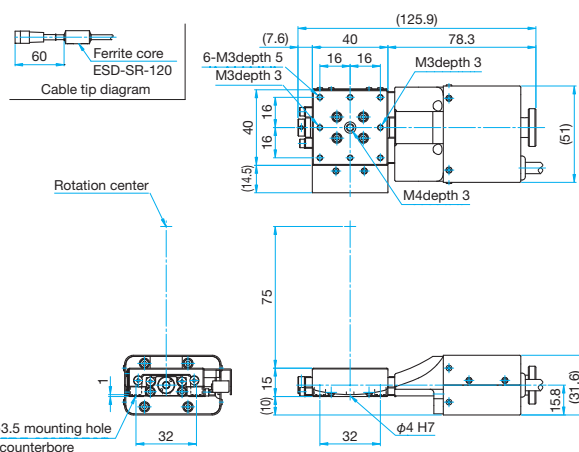
100 × 100 mm

120 × 120 mm

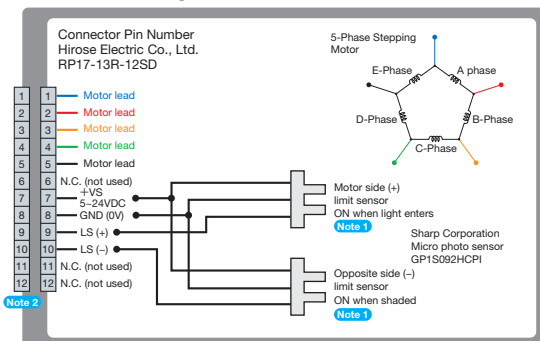
Others



Outline Drawing

OSMS-40A60 Hexagon socket head cap screw M3×6...4 screws, Attachment pins**OSMS-40A60R** Hexagon socket head cap screw M3×6...4 screws, Attachment pins**OSMS-40A75** Hexagon socket head cap screw M3×6...4 screws, Attachment pins**OSMS-40A75R** Hexagon socket head cap screw M3×6...4 screws, Attachment pins

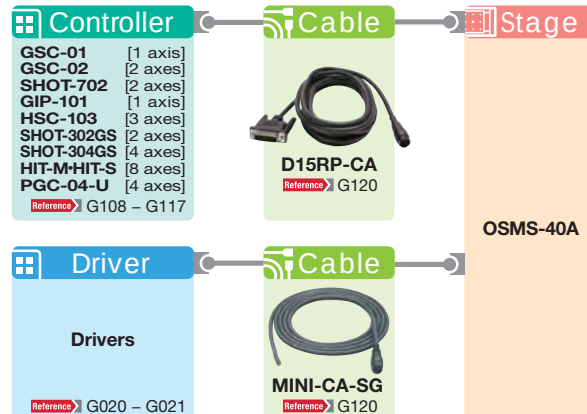
■ Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor. Motorized stages are not fitted with origin and proximity origin sensors. Limit sensors are used as origin detection sensors.

Note 2 Compatible cable connector: Hirose Electric Co., Ltd. RP17-13PA-12PC/RP17-PC-122

■ Compatible Controllers / Drivers and Cables



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Guide

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- Manual type (GOHT-60) is also available.

Reference E178

WEB Reference Catalog Code W7093



GOHT-60A***

Specifications

Part Number		OSMS-60A60	OSMS-60A85	OSMS-60A105	
(Opposite Model)		OSMS-60A60R	OSMS-60A85R	OSMS-60A105R	
Mechanical Specifications	Travel [°]	±14	±9	±7	
	Stage Size [mm]	60×60	60×60	60×60	
	Travel Mechanism (reduction ratio)	Worm gear (1: 246)	Worm gear (1: 314)	Worm gear (1: 380)	
	Positioning Slide	Extended Contact Ball Guide	Extended Contact Ball Guide	Extended Contact Ball Guide	
	Stage Material	SUS440C quench hardened	SUS440C quench hardened	SUS440C quench hardened	
	Finish	Super black chrome	Super black chrome	Super black chrome	
	Weight [kg]	0.85	0.75	0.75	
Size Tolerance	Stage Height [mm]	25	20	20	
	Rotation Center Height [mm]	60±0.1	85±0.1	105±0.1	
	Rotation Center Deflection Accuracy [mm]	Within φ0.01	Within φ0.01	Within φ0.01	
Accuracy Specifications	Resolution	(Full) [°/pulse]	about 0.00293	about 0.00229	about 0.00198
		(Half) [°/pulse]	about 0.00146	about 0.00115	about 0.00095
	MAX Speed [°/sec]	10	8	6.6	
	Positional Repeatability [°]	±0.004	±0.004	±0.004	
	Load Capacity [N]	29.4(3.0kgf)	29.4 (3.0kgf)	29.4 (3.0kgf)	
	Moment Stiffness [°/N·cm]	Roll 0.3 Yaw 0.3	Roll 0.3 Yaw 0.3	Roll 0.3 Yaw 0.3	
	Lost Motion [°]	0.02	0.02	0.02	
Sensor	Sensor Part Number	Micro photo sensor: GP1S097HCZ0F(Sharp Corporation): Limit Sensor, Origin Sensor			
	Limit Sensor	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	Equipped (NORMAL CLOSE)	
	Origin Sensor	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	Equipped (NORMAL OPEN)	

Motor / Sensor Specifications

Motor	Type	5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.)
	Motor Part Number	PK523HPB-C12 (□28mm)
	Step Angle	0.72°
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	Current Consumption	60mA or lower (20mA per sensor)
	Control Output	NPN open collector output DC30V or lower, 50mA or lower
	Output Logic	When shaded: Output transistor OFF (no conduction): Limit sensor When shaded: Output transistor ON (conduction): Origin sensor

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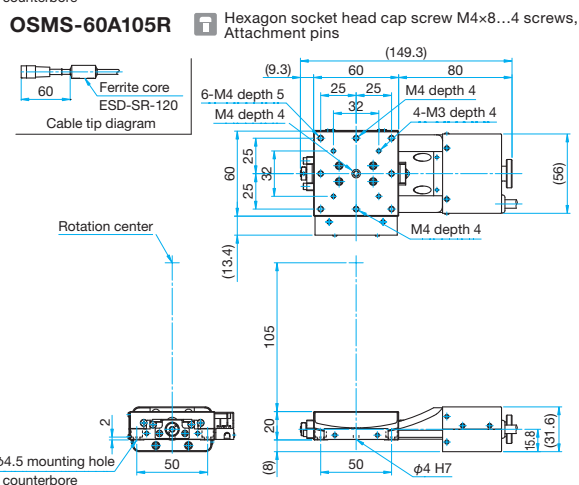
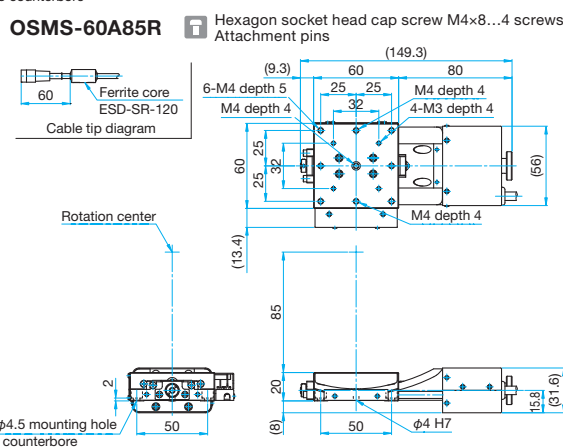
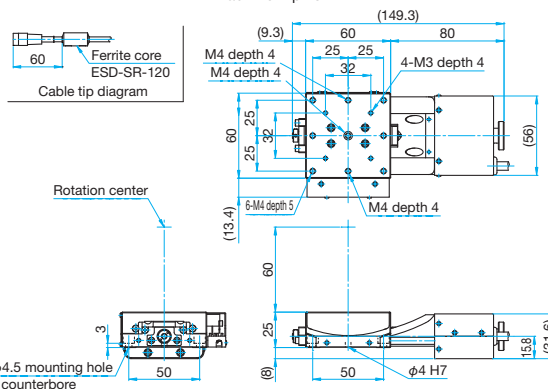
85 × 85 mm

100 × 100 mm

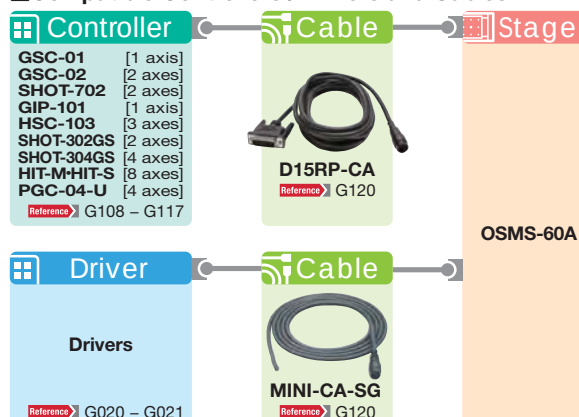
120 × 120 mm

Others

OSMS-60A60R Hexagon socket head cap screw M4x8...4 screws,
Attachment pins



Compatible Controllers / Drivers and Cables



Note 1 The motor side limit sensor is the + direction limit sensor. Motorized stages are not fitted with proximity origin sensors.

Note 2 Compatible cable connector:
Hirose Electric Co., Ltd. RP17-13PA-12PC/RP17-PC-122